

Fig. 6 is a simplified diagram of a concentraton plotted against flow rate according to an alternative embodiment of the present invention;

Fig. 7 is a simplified diagram of a plasma processing tool according to an embodiment of the present invention; and

Fig. 8 is a simplified diagram of a plasma processing tool according to an alternative embodiment of the present invention.--

IN THE CLAIMS:

Please cancel claims 8 and 12-20; amend claims 1, 2, 3, 5, and 6, and add new claims 21-22 as follows. Note that claims 21-22 remain unchanged, but are reproduced in the "Version with markings to show changes made" for the Examiner's convenience and reference.

1. (Amended) A method of surface treatment in a substantially downstream position of a plasma source, where an object to be processed is downstream from the plasma source, the method comprising generating a plasma discharge including a gas-C, the gas-C comprising a Gas-A molecule containing essentially hydrogen as an element and a Gas-B containing essentially a halogen and/or a halide; wherein said plasma discharge is substantially free from an oxygen bearing species.
2. (Amended) The method of claim 1 further comprising injecting a Gas-D in the downstream of the plasma of Gas-C to treat the object comprising a surface in a downstream position of the Gas-D injection.
3. (Amended) The method of claim 1, wherein using the gas B is selected from chlorine, bromine and/or iodine.
4. (Canceled)
5. (Amended) The method of claim 3, wherein Gas-B does not contain an oxygen atom.
6. (Amended) The method of claim 1, wherein the Gas B is selected from chlorine, hydrogen chloride, bromine, or hydrogen bromide.